

ABSTRACTS CONTRIBUTED PAPERS

KIDNEY FUNCTION IN GIANT CLAMS. R. G. B. Reid, Department of Biology, University of Victoria, Victoria, British Columbia.

The hypertrophied kidneys of giant clams have a digestive function, and can process zooxanthellae and store toxic and unusable components in nephroliths.

A TAXONOMIC REVISION OF THE CRASSATELLINAE OF THE EASTERN PACIFIC, WITH SOME COMMENTS ON THE BIOGEOGRAPHY OF THE PANAMA CONNECTION. Eugene Coan, Department of Zoology, California Academy of Sciences, Golden Gate Park, San Francisco.

The three Recent eastern Pacific species of the Crassatellinae belong in *Eucrassatella* Iredale, 1924. *Hybolophus* Stewart, 1930, is regarded as a synonym of this genus, as is the recently proposed but unavailable *Eucrassinella* Cruz, 1980. The rare *E. fluctuata* (Carpenter, 1864) occurs off the Channel Islands of southern California at a mean depth of 88 m; a synonym is *Crassatellites lomitensis* Oldroyd, 1924. *Crassatella marginata* Keep, 1887, "ex Carpenter MS," which has been synonymized with *E. fluctuata*, is instead based on specimens of the bernardinid genus *Halodakra*, perhaps *H. salmonea* (Carpenter, 1864). *Eucrassatella gibbosa* (Sowerby, 1832) occurs from the Gulf of California to Peru at a mean depth of 32 m. Added to its synonymy are *Eucrassatella* (*Hybolophus*) *gibbosa* Olsson, 1932; and *Eucrassatella manabiensis* and *E. aequitorialis* Cruz, 1980. *Crassatella corbuloides* Reeve, 1842, which has been synonymized with *E. gibbosa*, is instead an Australian taxon. The Venezuelan *Eucrassatella antillarum* (Reeve, 1842) is synonymized with the eastern Pacific *E. digueti* (Lamy, 1917). In the eastern Pacific this species occurs at a mean depth of 45 m from the Gulf of California to Ecuador. Newly added to its synonymy is *Crassatella laevis* A. Adams, 1854, from the Caribbean.

There has been an overrecognition of full, cognate species between the Panamic and Caribbean faunal provinces. Increased consideration should be given to the use of subspecies or describing the morphological differences between populations without naming them.

DESCRIPTION OF FIVE NEW SPECIES OF HAWAIIAN EULIMIDAE. Anders Warén, University of Goteborg, Sweden, Beatrice L. Burch and Thomas A. Burch, Kailua, Hawaii.

Five new species of Eulimidae obtained from echinoids collected by scuba or dredging from 15 to 470 meters off Oahu, Hawaii are described briefly. Since the article naming the species has not been published, specific names will not be used.

A species of *Trochostylifer* was found in galls on the heavy dorsal spines of *Chondrocidaris gigantea* at depths of

15 to 25 meters. A second species of *Trochostylifer* was found in the galls on the test of the closely related echinoid, *Prionocidaris hawaiiensis* from a depth of 72 meters.

Two species that have been placed provisionally in the genus *Vitreolina* were found on the same two species of echinoids.

The fifth species of eulimid is in the genus *Pelse-neeria*, which was found on *Aspidodiadema hawaiiensis* dredged from 470 meters off Honolulu.

LARVAL WASHOFF: EULIMID INFESTATION RATES AROUND AN OCEANIC ISLAND. Gustav Paulay, University of Washington, Seattle.

Oceanic islands in a steady current generated by trade winds face a loss of pelagic larvae of marine invertebrates carried off by the current. Although eddies, long-shore currents, and lagoons may facilitate larval retention, there is still an expected loss as well as net transport of larvae from the windward to the leeward side of an island. To test this prediction, I investigated infestation rates by *Melanella* sp., a eulimid prosobranch inhabiting the body wall of *Stichopus chloronotus*, an aspidochirote holothurian around Rarotonga, Cook Islands. Eight sites around the island's periphery were examined, seven on the narrow (20–700 m wide) fringing reef and one on the outer reef slope. *Stichopus* is almost entirely restricted to the fringing reef. An endoparasite is the best adult system for this type of study, as its habitat (the host) is easily ascertained, and internal parasites are least affected by external stresses. Infestation rates change from 0.05 parasite/host on the East (windward) side through 0.46 on the North, to 0.84 on the West (leeward) side of the fringing reef. Three alternative hypotheses, 1) selective mortality, 2) association with reef exposure, and 3) dependence on host size, are rejected. A fourth, greater ease of host infection on the leeward side, cannot at present be rejected, as the host is more crowded, and smaller there. However, this latter observation is also consistent with larval washoff affecting the host population.

HOW CYPHOMA GET THEIR SPOTS: DIET MIXING. C. Drew Harvell, Department of Zoology, University of Washington, Seattle.

Cyphoma gibbosum is a ubiquitous, tropical cowrie that feeds on gorgonian colonies inhabiting shallow Caribbean reefs. Adults are brightly colored and juveniles are cryptic. Adult coloration is due to an unusual color pattern incorporated into a retractable mantle: hollow black spots outlined against a contrasting orange or yellow background. Juvenile coloration is similar, but the spots are muted and blend with the prey colony. Thus juveniles on both light and dark colonies are cryptic against their prey. The mechanism of the color change is unknown, but may be due to chromatophores or differential pigment uptake from the prey.